

10/735,200  
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**AMENDMENTS TO THE SPECIFICATION:**

Please replace the following numbered paragraphs with the following rewritten paragraphs:

[21] In operation, fuel flowing through the fuel channel 40 in the direction of arrow F are caused to change direction and mix by the signal generator system 36 and contact a permeable membrane 42. Vacuum creates an oxygen partial pressure differential between the inner walls of the fuel passage 40 and the oxygen permeable membrane 42 which causes diffusion of oxygen dissolved within the fuel to migrate through a porous substrate 46 which supports the membrane 42 and out of the deoxygenator system 14 through an oxygen transport passage 44 separate from the fuel channel 48 40. In the micro channel, fully filled with the fuel stream, the concentration of the flammable volatiles is minimized and oxygen is removed through an oxygen permeable membrane 42 (by pressure difference across the membrane) immediately after bubble discharge on the membrane wall.

[24] Preferably, the transducers 38 are arranged in off-axial positions off a central axis A with respect to the fuel channel 40. The transducers 38 are angled relative to each other to cause effective mixing (also illustrated in Figure 3). ~~Generally, the off-axes arranged transducer 38a applies perturbations to the periodic flow created by the in-flow arranged transducer 38b:~~

[25] The transducers 38 cause acoustic/ultrasound signals S within the fuel channel 40. The signals S generate acoustic flow chaotization, destroying oxygen depleted boundary layer and significantly improving flow mixing, intensifying oxygen supply to the surface of the oxygen-removing membrane ~~[[44]]~~ 42